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DATE MAILED: 04/19/2010

23998-021

NOTICE OF ALLOWANCE AND FEE(S) DUE

42532 7590 04/19/2010 ROSKAUER ROSE LLP

PROSKAUER ROSE LLP ONE INTERNATIONAL PLACE BOSTON, MA 02110

APPLICATION NO.

	EXAMINER			
SAIDHA, TEKCHAND				
	ART UNIT	PAPER NUMBER		
_	1772			

CONFIRMATION NO.

4573

FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO.

10/572,976 11/20/2006 John W. Frost
TITLE OF INVENTION: METHODS AND MATERIALS FOR THE PRODUCTION OF SHIKIMIC ACID

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	07/19/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and I/2 the ISSUE FIEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE DEE and DURI ICATION DEE (if required). Blocks 1 through 5 should be completed where

appropriate. All further indicated unless corrects maintenance fee notifica	correspondence including ed below or directed out tions.	ng the Patent, advance of nerwise in Block 1, by (rders and notification of a) specifying a new corre	maintenance fees spondence address	will be ; and/o	mailed to the current r (b) indicating a sepa	correspondence address as trate "FEE ADDRESS" for
CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)				Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.			
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							(Depositor's name)
							(Signature)
							(Date)
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR		ATTO	ORNEY DOCKET NO.	CONFIRMATION NO.
10/572,976	11/20/2006	•	John W. Frost			23998-021	4573
TITLE OF INVENTION	: METHODS AND MA	TERIALS FOR THE PR	ODUCTION OF SHIKIM	IC ACID			
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSU	E FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0		\$1810	07/19/2010
EXAM	IINER	ART UNIT	CLASS-SUBCLASS]			
SAIDHA, T	EKCHAND	1652	435-232000				
Change of corresponder CFR 1.363).	ence address or indicatio	n of "Fee Address" (37	2. For printing on the patent front page, list				
			(I) the names of up to 3 registered patent attorneys or agents OR, alternatively,				
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.			(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to				
			2 registered patent attorneys or agents. If no name is 3				
		A TO BE PRINTED ON	THE PATENT (print or ty	ne)			
PLEASE NOTE: Uni	less an assignee is ident	ified below, no assignee	data will appear on the p	oatent. If an assign	nee is i	dentified below, the de	ocument has been filed for
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(A) NAME OF ASSI	ONLL		(B) RESIDENCES (CIT	and STATE OK	COOL	IKI)	
Please check the appropr	iate assignee category or	categories (will not be p	rinted on the patent):	Individual 🔲 C	orporat	ion or other private gro	oup entity 🚨 Government
4a. The following fee(s)	are submitted:	4	b. Payment of Fee(s): (Ple	ase first reapply a	ny pre	viously paid issue fee	shown above)
Issue Fee			A check is enclosed.				
□ Publication Fee (No small entity discount permitted) □ Advance Order - # of Copies □ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any					ficiency or credit any		
			overpayment, to Dep	osit Account Numb	er	(enclose a	n extra copy of this form).
5. Change in Entity Sta	tus (from status indicate is SMALL ENTITY stati		☐ b. Applicant is no lor	one claiming SMA	II EN	TITY status Son 27 Cl	3P 1 27(a)(2)
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APPLICATION NO.	FILING DATE	FILING DATE FIRST NAMED INVENTOR .		CONFIRMATION NO.	
10/572,976	11/20/2006	John W. Frost	23998-021	4573	
42532	7590 04/19/2010		EXAM	IINER	
PROSKAUER ROSE LLP			SAIDHA, TEKCHAND		
ONE INTERNATIONAL PLACE BOSTON, MA 02110			ART UNIT	PAPER NUMBER	
			1652		

DATE MAILED: 04/19/2010

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 33 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 33 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.	Applicant(s)			
10/572,976	FROST, JOHN W.			
Examiner	Art Unit			
Tekchand Saidha	1652			

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- This communication is responsive to 3/24/2010.
- The allowed claim(s) is/are 23-30,38,46-51,53 and 61-63.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - b) ☐ Some* c) ☐ None of the: a) \square All
 - 1. T Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No.
 - 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6.

DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. | Notice of References Cited (PTO-892)
- 2. Notice of Draftperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statements (PTO/SB/08). Paper No./Mail Date 11/14/2009
- ☐ Examiner's Comment Regarding Requirement for Deposit. of Biological Material
- 5. Notice of Informal Patent Application
- Interview Summary (PTO-413), Paper No./Mail Date
- 7. X Examiner's Amendment/Comment
- 8. X Examiner's Statement of Reasons for Allowance
- 9. ☐ Other

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Art Unit: 1652

Examiner's Amendment/Notice of Allowability

Amendment filed on 3/24/2010 is acknowledged.

Claims 23-30, 38, 46-51, 53 & 61-63 are present and under consideration in this application.

- Claims 23-30, 38, 46-51, 53 & 61-63 are allowed, subject to the following Examiner's Amendment.
- 4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jennifer A. Camacho on April 9, 2010.

Amend claims as follows:

Claim 23, line 4, after the words 'aldolase having' delete 'an' and replace with "the".

Claim 29, line 4, after the word 'having' delete 'an' and replace with "the".

Claim 38, line 7, after the words 'aldolase having' delete 'an' and replace with "the".

Claim 46, line 4, after the word 'having' delete 'an' and replace with "the".

Claim 50, line 4, after the word 'having' delete 'an' and replace with "the".

5. The following is an examiner's statement of reasons for allowance:

Applicants' arguments were found to be persuasive with regard to 112 issues in view of claim amendment. Accordingly all prior rejections are withdrawn. Claims 23-30, 38, 46-51, 53 & 61-63 as amended are unobvious and patentable.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance." Application/Control Number: 10/572,976 Page 3

Art Unit: 1652

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tekchand Saidha whose telephone number is (571) 272 0940. The examiner can normally be reached on 8.30 am - 5.00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew J. Wang can be reached on (571) 272 0811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tekchand Saidha/ Primary Examiner, Art Unit 1652 Recombinant Enzymes, 02A65 Remsen Bld. 400 Dulany Street, Alexandria, VA 22314 Telephone: (571) 272-0940 April 9, 2010